

100-FR-3 ISSUE RESOLUTION

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4. Deficiency/Recommendation: Section 2.1.1, page WP2-1, second paragraph

A map indicating the boundary of the 100-FR-3 operable unit with respect to the stated Hanford site plan coordinates should be included to better represent the location of the operable unit.

Response: Accept. Approximate Hanford Coordinates will be added to Figure 1-1.

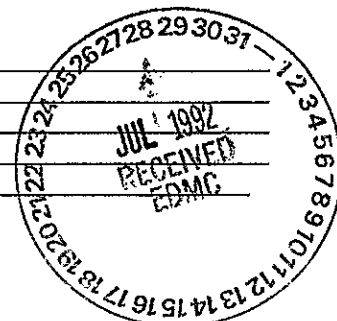
9. Comment: Section 2.2.6.2, pp. WP 2-22

The Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington (Fitzner and Weiss, Oct 1991) gives further information regarding the habitat of the bald eagle on the Hanford Site. Of particular interest is the occurrence of two nesting areas in the F Area, one north and one south of 100-F. This information should be included in the work plan as it may effect investigation scheduling.

Responses: A check of the publication and with one of the authors revealed that the two referenced areas were not within the F area. In 1991, Bald Eagle nests were observed both north and south of the F Area. Bald Eagles appear to nest at different locations from year to year rather than at fixed or relatively fixed locations.

14. Comment: Table 2-2, p. WP 2T-2A

This information would be more useful if the depth to water was correlated with the well construction at the time of water-level measurement. With each change in well construction, water-levels and water-quality can be expected to change. The well data should be presented to show the periods of each construction in each well so that water-



level and water-quality data can be matched to the proper construction.

Response: Discuss. The detail is not warranted given the uncertainties in past well construction.

15. Deficiency/Recommendation: Table 2-3, page WP2T-3a

A space should be inserted between 'persistent' and 'sepal' in the section for endangered vascular plants.

Response: Reject. "Persistentsepal" is correct as written.

17. Deficiency: Section 3.1.1.1, page WP 3-2

This section discusses the 116-F-14 retention basin. It is noted that sludge was removed from the basin on at least one occasion but the final burial location of the sludge is unknown. According to agreements reached during the comment resolution meeting held on October 15, 1991, it was agreed that if information gathered during the compilation task does not reveal the burial location then remote sensing methods could be employed to locate the sludge. This information needs to be included in the work plan.

Response: Discuss.

24. Deficiency: Section 3.1.3.2.1, page WP 3-19

The text discusses the nature and extent of contamination for a limited number of contaminants. For example, the nature and extent of contamination for inorganic metals is not discussed. Concentrations of metals are provided for filtered samples only. State and federal drinking water standards, and most risk assessments, are based on the analysis of unfiltered samples. Therefore, based on data

provided in the text, it is not possible to determine if risk-based levels have been exceeded.

Recommendation:

The nature and extent of contamination in groundwater by inorganic contaminants are not but should be discussed in this section.

Response: Discuss. The benefit of obtaining and summarizing data for unfiltered samples at this time is unclear.

_____ data will be collected from groundwater comp.

25. **Deficiency/Recommendation:** Section 3.1.4, page WP3-21, second paragraph

The text refers to applicable DOE concentration guides for several chemicals. The work plan does not but should provide a reference for these concentration guides and include a table comparing analytical results with the appropriate DOE concentration guide.

Response: Reject. The DOE concentration guidelines and the results of this study are available in the reference provided earlier in the paragraph. A more detailed summary of this study does not appear to be warranted.

_____ a table will not be added.

38. **Deficiency:** Figure 3-19, p. WP 3F-19

Potential conflict with ARARs or future land and water use is shown as yes and no for various interim remedial technologies. There is no discussion in the text about this potential conflict with ARARs.

Recommendation:

A brief discussion should be included in Section 3.0 on the potential conflict of each process option with ARARs or with future land and water use.

Response: Reject. This is not the appropriate location for a detailed discussion of the potential conflicts between RI technologies and ARARs or future land and water use. This analysis will be conducted as part of the FS.

59. Deficiency/Recommendation: Section 5.1, page WP 5-1

No tasks or subtasks are provided to meet the following data needs:

- Groundwater recharge and discharge, and contaminant transport from off-site sources to the 100-F area (Section 4.1.2.1)
- Effects on the 100-FR-3 operable unit from effluent disposal activities in other areas (such as the operation of B- and U-Ponds) (Section 4.1.2.1)
- Treatability study information relevant to the limited range of interim actions that may be considered (4.1.2.3)
- Information on the nature and extent of soils contaminated by seeps at the river edge and the human and environmental risks posed by this soil (Section 4.1.2.4)

How these data needs will be met should be explained either under separate tasks or under relevant tasks provided in Section 5.0.

Response: Discuss. Each of the bullets are discussed below:

- 1) Groundwater recharge and discharge and contaminant transport from off-site sources to the 100-F Area will be included within Task 6.
 - 2) Effluent disposal in the 200 Areas is unlikely to have a measurable impact on the F-Area RI/FS.
 - 3) Treatability study information will be considered as deemed necessary in the screening stage of the FS.
 - 4) Sediment contamination due to seeps will be considered as part of Task 4: Surface Water and Sediments Investigation.
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60. Comment: Section 5.1.3.2, p. WP 5-4

It is stated that surface mapping will be conducted within the 100-F area from the river to the vicinity of the reactor building. All the 100-FR-3 operable unit should be mapped.

* Check w/ Peterson - get back w/ 1/30/84

Response: Discuss.

in the map of the area of the reactor building

61. Comment: Section 5.1.3.2, p. WP 5-5

A fourth bullet (the geologic unit at the land surface) should be added to the three bullets indicating the features to be recorded on the topographic map.

Response: Discuss.

71. Deficiency/Recommendation: Section 5.1.6.3, pages WP 5-14 and WP 5-15

Ambiguous statements such as "where existing water quality data are insufficient to identify a reduced list of parameters" (first sentence) and "unless a reduced list of parameters can be identified from existing data" (second paragraph) should be deleted. Section 4.0 indicates that the amount and quality of available information are not adequate to quantify the risk and complete the FS. Further, the available data are not validated and do not include a full suite of analytes. Hence, the text in this section should specify that the first two rounds of groundwater samples will be analyzed for a full suite of analytes. Also, the last sentence of the second paragraph (page WP 5-15) should be moved to the end of first paragraph for continuity.

The text in the first paragraph (page WP 5-14) states that groundwater samples will be analyzed for only selected radionuclides, but no rationale is provided. The selected radionuclides should be referenced here.

Response: Reject. EPA and Ecology will have the opportunity to review any reduced constituent list and make changes before sampling begins. The text will not be changed.

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76. **Deficiency:** Section 5.2.4, page WP5-21

In item 1, it is not clear whether the primary task is to identify contaminants of concern for the vadose zone soils or the aquifer soils.

Item 2 applies to the 100 Area soil aggregate feasibility study but does not apply to the 100 Area groundwater aggregate feasibility study.

Recommendation:

Since this section addresses the scope of work for the 100 Area groundwater aggregate feasibility study, the text should clarify that the primary task for item 1 is identification of contaminants of concern for the aquifer soils and groundwater, as proposed in Section 3.4.3.

Item 2 should include identification of ARARs pertinent to the removal of aquifer soils as well as contaminated groundwater extraction and reinjection, treatment, and disposal.

Response: Item 1 refers to all soils. Item 2 does refer to the 100 Area groundwater aggregate FS because groundwater treatment may require disposal of aquifer soils or treatment waters in the 200 Area.

81. **Deficiency/Recommendation:** Section 8.0, page WP8-4

The reference section should include additional EPA Region 10 risk assessment guidance (EPA 1991).

Response: Reject. This reference was not accepted.

86. Deficiency: Section 3.4, p. D1-3

The one-hour period for measuring trends in conductivity, pH, and temperature is insufficient.

Recommendation:

The period of trend watching has to be increased. The needed length of the period could be determined by investigating the nature of trends in water-quality at springs, water-levels in near-shore wells, and river stages at a few locations for a period of several days. The observed relationships should allow us to determine the needed period of trend monitoring for all seeps/springs.

Response: Reject. Seepage sampling has been completed. This comment will be used in developing the sampling recommendations in Milestone M-30-02.

87. Deficiency/Recommendation: Appendix D, Section 3.4, page D1-3

This section does not address sampling of soil and river sediments contaminated by seeps and springs. This deficiency should be addressed.

Also, a map indicating approximate sampling locations should be included.

Response: Reject. The sampling has already been completed.

88. Deficiency/Recommendation: Appendix D, Section 3.5, page D1-4

A rationale for analyzing water and sediment samples for selected radionuclides and for not analyzing organics should be provided. The existing data for springs and seeps is only for temperature. Limited or no data exist for organic contamination. Many radionuclides were detected in the Columbia River water and sediments (Sections 3.1.4.2 and 3.1.4.4). Also, many radionuclides and organic contaminants were detected in groundwater in the 100-FR-3 operable unit.

Hence, the water and sediment samples from springs and seeps and rivers should be analyzed for contaminants of interest presented in Table 3-28.

Response. Discuss. *reject*

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89. Deficiency: Section 3.6, p. D1-5

Only three wells are scheduled for water-level records in the vicinity of each of the river-stage recorders. Three are not sufficient for analysis of the river-aquifer connection.

Recommendation:

In the vicinity of each river-stage recorder, we should have a minimum of three wells parallel to the river and three wells perpendicular to the river. These two lines can (and should) intersect, resulting in five wells needed to construct the two lines. If a "reference" well is needed (i.e., a well which will be used to eliminate the effects of partial penetration of the river and "skin effects" of the river bed), then a sixth well may be necessary. All of these wells should be continuously sampled for selected water-quality parameters (e.g., temperature and specific conductance) as well as for water levels.

Response: Reject. A longer term monitoring program can better be planned and implemented based on the results of Milestones M-30-03 and M-30-04.

